

THE ILEOCÆCAL ORIFICE AND ITS BEARING ON
CHRONIC CONSTIPATION, WITH REPORT
OF TWO CASES RELIEVED BY
OPERATION.¹

By WILLIAM J. MAYO, A.M., M.D.,
OF ROCHESTER, MINN.

MISS E. V., aged twenty-one, was admitted to St. Mary's Hospital, Rochester, Minn., on August 14, 1899, with the following history:

She has been obstinately constipated since a child. This condition has increased with years, and now requires the use of a large amount of laxative to secure a faecal movement. For a year or more has suffered from pain in the region of the appendix, which is much aggravated by the use of the necessary remedies for the relief of the constipation. At times this right-sided pain confines her to her bed for several days.

Examination.—A strongly-built girl of 140 pounds in weight, general appearance anaemic, color pale, tongue coated. No evidences of disease beyond a soreness in the region of the cæcum and some muscular rigidity at this place.

On the history of the obstinate constipation, the attacks of right-sided pain lasting several days at a time, and the local tenderness, a diagnosis of chronic appendicitis seemed reasonable, and on August 16 the appendix was removed. There were a few adhesions about the appendix, but not enough evidences of disease to account for the symptoms. It was noticed at this time that the small bowel was quite full of material in spite of the previous energetic purgation. At the junction of the ileum and cæcum the calibre was reduced markedly, having almost the appearance of having a string tied around it sufficiently tight to reduce the lumen one-third. There were no evidences of previous ulcer-

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tion nor disease. Nothing further was done at this time. Following the operation no improvement in the constipation took place, nor was there any marked relief to the symptoms. December 29, 1899, the patient was readmitted to St. Mary's Hospital, and the ileocaecal coil exposed. An incision was made two and one-half inches in length at right angles to the ileocaecal juncture, having its centre at that point. The wound was sutured transversely, after the manner of the Heineke-Mikulicz pyloroplasty, making a very considerable increase in the size of the aperture between the ileum and cæcum.

The bowels now act regularly or with slight aid and in marked contrast to the previous condition. The pain and tenderness have disappeared and the general condition has vastly improved.

The time which has elapsed is too short to give this case much value, and my purpose in reporting it is to call attention to some facts which a superficial investigation of the subject has brought forth, and to some deductions from the facts which may be and probably are true.

The literature bearing on the subject as to the function of the ileocaecal valve is meagre. It seems to be taken for granted that its main purpose is to prevent the return of material of any kind from the large into the small bowel, and there is no doubt that this is one of its functions. The ileocaecal valves consist of two semilunar folds of mucous membrane situated one superiorly and the other inferiorly, leaving a transverse slit between at the point of junction of the ileum and cæcum. On one side of the valve is the mucous membrane of the small bowel, on the other that of the large intestine. Immediately at the base of the valves is a circular fold of muscle fibres forming a constrictor muscle having much the appearance of the pylorus. The mechanism of the ileocaecal opening certainly bears out the view that one of its main functions is to prevent the too rapid emptying of the small bowel, and to maintain some pressure against peristalsis until the process of small bowel digestion is properly completed. It naturally follows that if for any reason the barrier to ready egress be excessive,

partial retention of small bowel contents takes place, and a small bowel constipation, so to speak, with a resulting train of symptoms due to fermentation and absorption, necessarily results.

The slow delivery of the intestinal contents into the large bowel, and perhaps in a condition changed from the normal, predisposes to constipation, the large bowel being indirectly rather than directly at fault.

There is no means at present of estimating the effect on intestinal digestion of partial obstruction, and especially so in a minor degree; yet, if we look at the effects of even slight obstructions at orifices having a similar function, such as the outlet of the stomach, urinary bladder, etc., we cannot but be struck with the remarkable similarity in results,—a more or less painful excretion.

The secretions in the small bowel are alkaline, in the large bowel slightly acid, and in the production of this change gases are evolved which materially aid the passage of faecal matter along the large bowel. The thinness of the muscular coat of the large bowel and its sacculations make it evident that flatus is a necessary adjunct to faecal progress. It becomes a question, also, as to whether or not the greater amount of absorption which takes place in the small bowel under such circumstances leaves the contents, when passed, in a condition less favorable to stimulate the peristalsis and production of gases in the large bowel. The writer has in eight cases eliminated the ileocaecal mechanism as a factor in the intestinal circulation either by removing the parts for malignant or tubercular disease or by an ileocolostomy, and in each instance the bowel movement became looser and more frequent than had been the habit of the individual previous to the advent of the disease for the relief of which the operation was undertaken; showing that, if the ileocaecal valves are not present, the faecal circulation in the large bowel is rendered more active.

In going over the anatomy of this region and in a few dissections, I have noticed that the terminal portion of the ileum comes upward out of the small pelvis, forming some-

what of an acute angle near its insertion into the cæcum. The mesentery of the ileoæcal coil being of good length, but at a point just above this portion of the lower ileum, the mesentery is shorter; and it is in this lower portion of the ileum that typhoid perforations are most common, and this question of the vulnerability of the lower ileum to infectious processes brings up at once the important point: What will be the effect of enlarging the orifice in permitting a freer communication between the bacteria in the large and small bowel, especially the colon group? So far as I am able to learn in the few cases in which this has been done for diseased processes, no harmful effect has been noted.

Since I have had this subject in mind, I have examined with some care the ileoæcal coil in the course of a number of abdominal operations to see if there was any ready way of estimating the size of the ileoæcal orifice. In most cases an inspection will reveal any marked abnormality. Some information can be gained by causing the finger to invaginate the wall of the ileum into the cæcum, and in a few cases the cæcum into the ileum in a manner similar to the process of invaginating the finger against the scrotum into the external hernial ring.

I had an opportunity to repeat the operation on an inmate of the Rochester State Hospital for the Insane. The history of this case is briefly as follows:

Miss L. C., aged twenty-five years, was admitted to the Rochester State Hospital for the Insane, November 2, 1898, suffering from melancholia. In the history of the case previous to admission, constipation of the most obstinate character was about the only symptom of physical ailment. Since in the hospital she has constantly suffered from constipation, which has required the usual remedies in large quantities, and, in spite of constant watchfulness, has had a number of attacks of obstipation. During these attacks there has been soreness in the cæcal region.

Examination.—An anaemic girl of slender physique. On pressure, a sensitiveness in the region of the appendix was apparent, with rigidity of the right rectus muscle. Abdomen was somewhat distended with gas.

The diagnosis of chronic appendicitis seemed justifiable, based on the previous attacks of pain and obstipation and the present tenderness. Exploration, February 27, 1900, revealed a normal appendix. The ileocecal coil was drawn out and examined; the same condition was found as in case number one,—an unusual narrowing of the aperture between the small and large intestine. A plastic operation was performed similar to the previous case. An incision three inches in length was made into the lumen of the ileocecal coil in the direction of the small intestine, having its centre at the superior valve, which it divided. This wound was closed transversely.

It is not intended in this short communication to do more than draw attention to the subject. The mere fact that two cases have been relieved of pain in the region of the cæcum and constipation by a plastic operation which enlarges the calibre of the ileocecal opening does not warrant that any conclusions should be formulated. It is well understood that chronic constipation is ordinarily a disease of the large bowel; but I believe that there are certain cases in which an organic or functional narrowing of the ileocecal opening is responsible for a train of symptoms of which pain in the region of the cæcum without marked disease of the appendix and chronic constipation are important symptoms.

[NOTE.—May 17, 1900. Within a few days I have examined both of these cases. The constipation in each has practically disappeared, and the general condition has greatly improved.]